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THIS IS UNEVALUATED INFORMATION

1. Basic development of the Tromsdorf rocket was undertaken by Krupp in Essen. Dr. Tromsdorf then officer with WAPRUEF 1 had been put in charge of this development work by the Army High Command. When the Russians, after his capture at the testing range of Hillersleben, offered him a monthly salary of 2500 M, bonuses and special rations, Tromsdorf immediately accepted and joined the Berlin Institute which was at that time located on the premises of GEMA Berlin-Köpenick, Wendenschlossstrasse.

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2. At the Berlin Institute, the Russians made a whole department available to Tromsdorf in order to continue development of the Tromsdorf rocket. The department consisted of:

   a. A desigining section with ten technicians, headed by Ing. Richter.

   b. A mathematical section with eight mathematicians.

   c. An experimental workshop with five mechanics.

3. Especially important was the solution of those problems connected with the technique of flow. The necessary calculations and experiments were carried out by aircraft specialists. Diesel motor specialists occupied themselves with the proper combustion of the Diesel fuel carried by the rocket.

4. The work, however, did not progressfast enough for the Russians. In order to create a favorable impression in Russia, trick photos were made showing the practical firing tests of the Tromsdorf rocket although in reality, no such tests were ever conducted.

5. In October 1946, Dr. Tromsdorf and his family, together with other specialists from GEMA, were deported to Russia. He is now said to work in a suburb of Moscow.

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6. A short description of the Tromsdorf rocket

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   a. Performance of the rocket.

   The Tromsdorf rocket is fired like a 24 cm projectile from the German long-range gun K3 and reaches a maximum height of approximately 80 km. With the

aid of rocket propulsion which then takes over, the range can be increased to over 500 km. If the rocket is produced accurately in all its parts and if the amount of propellant is calculated exactly, the target accuracy is said to be surprisingly high.

25X1 b. Description of the parts.

The rocket consists of an inner and an outer body. The inner body is marked (1). The diffusor (2) is screwed to the front end of the outer body. In order to protect its extremely sharp front edge, the diffusor is screwed in shortly before the firing of the rocket. The copper leading rings (3) are rolled into the outer hull; they guide the rocket in the rifling of the gun barrel. The spacing blocks (4) fix accurately the distance between the outer and the inner bodies. The inner body is composed of three main parts. The slender point is screwed in, and the cylindrical surface (5) helps to center the point perfectly. After the point has been screwed in, the polished outer surface (~~~~) must fit absolutely smoothly into the adjoining inner body. The rear part of the inner body is soldered to the front one. The outer surface of the inner body is finely polished. The hollow space of the head carries the explosive charge (6) into which the fuse (7) protrudes. The inner body is subdivided into chambers. The chamber marked (8) contains the Diesel fuel. Fine holes are drilled in great number around the periphery at (9); they are sealed by a pasted-on collodion strip. The part numbered (10) is a pressure regulator. The chamber marked (11) contains slow burning black powder. This chamber is closed off by valves (12) and (13). All surfaces serving as ducts for air are highly polished. Since the rocket must not be off balance in the slightest degree, the center of gravity must lie exactly in the axis.

c. Operation of the rocket.

After firing from the K3 gun, the rocket flies at first like an ordinary shell with an initial velocity of 800 m/sec. It revolves about 100 times/sec through the rifling of the barrel and is thereby kept stable in flight. The air rushing into the diffusor (2) is highly compressed and heats up quickly. At a certain time, which can be calculated, the heat at point (9) becomes so great that the collodion strip burns up. As a result the fine exit apertures for the Diesel fuel are opened. Carried away by the strong air current, the fuel is vaporized. The air/fuel mixture ignites and the combustion gases leave through the Laval jet (14) propelling the rocket at high velocity. Through the valve at (12) which has opened in the meantime, the powder chamber has established contact between the hot combustion gases and the powder which now ignites, whereupon valve (12) closes again. Now the pressure of the powder gases forces the Diesel fuel out and the pressure regulator (10) provides the pressure for an even flow. If the pressure in the chamber (11) becomes too high, the valve (13) opens and permits the surplus powder gases to escape through the Laval jet.

25X1 Comment: Tromsdorf is a ballistics expert of no small talent. He developed the German 90 mm gun which was first used by German parachutists in their assault on Crete. He was a specialist on recoilless gun barrels and his ideas considerably simplified the design and construction of gun carriages. He worked in close connection with Prof. Klose at the German Army testing range of Kummersdorf. Tromsdorf was also engaged in jet propulsion problems. After the war, the Russians wanted him to continue
25X1 in his research and gave him a small, specially equipped factory. In 1948, Prof. Klose and Tromsdorf near Moscow complaining of their extreme isolation because of the lack of proper contacts and facilities. Both have to instruct their children privately because no schools are available.